The Campus

"A black cultural center *has the opportunity not only to educate, but, if there*

More Nurses, More Ways

A national nursing shortage is engendering creative solutions at Vanderbilt.

Vanderbilt Children's Hospital, which employs 600 nurses, will soon begin offering flexible shifts as short as four hours in an effort to appeal both to young parents and to older nurses who find typical 12-hour shifts too tiring.

With the four-hour shifts, there is no minimum number of hours nurses are required to work. Nurses who work at least 30 hours per week can qualify for benefits.

Nurses from foreign countries who want to work in the U.S. will get some help thanks to a new course created by Vanderbilt University School of Nursing in partnership with the Vanderbilt English Language Center.

"The course will help nurses who were educated in their own countries prepare to take the registered nurse licensing exams here, master English language skills, and learn to bridge cultural gaps in the U.S. health-care system and their home countries," says Linda Norman, senior associate dean of academics at VUSN.

VUSN community health instructor Carol Etherington, a mentor to the refugee population in Nashville, helped spark the idea for the creation of the new course. "Having a program like this and utilizing skills of people who have already migrated to the United States and plan to remain here is a far more reasonable approach to enhancing the nursing pool than going to another country and recruiting them," says Etherington.

Students interested in enrolling in the program must show proof of education in programs that are similar to U.S. registered-nurse programs from their home countries before beginning the course.

The School of Nursing also has begun a partnership with Lipscomb University in Nashville to offer Lipscomb students a bachelor of science in nursing (BSN) degree with courses provided by Vanderbilt. HCA Inc., which operates 190 hospitals and has its headquarters in Nashville, is giving Lipscomb University $500,000 to start the program. Lipscomb will provide the first five semesters of a pre-nursing liberal-arts program of study. Vanderbilt will then provide the remaining three semesters of nursing courses and clinical work. Students will be awarded a bachelor of science degree in nursing from Lipscomb. VUSN already has a similar agreement with Fisk University in Nashville.

NEIL BRAKE

Dedrick Woodard, age 1, was the first child moved to the new Children's Hospital from the Emergency Department.

NEIL BRAKE

{Details}

Pillar of the Community

A stone pillar near what is now Vanderbilt Law School dates back to 1875 and formed part of the original main entrance to campus. Pairs of the pillars supported iron gates which allowed entrance through a whitewashed board fence but kept out cattle that once freely grazed the surrounding area.

Fall 2004

are wounds that are still open, to help salve the wounds." —FRANK DOBSON JR.

School of Engineering to Lead Defense Nanotechnology Program

The School of Engineering will lead a $2.4 million, multi-institutional nanotechnology program funded by the U.S. Army Research Laboratory to develop radically improved electronics, sensors, energy-conversion devices, and other critical defense systems.

The Advanced Carbon Nanotechnology Research Program will explore various nanostructures of carbon, including diamond, at the molecular level to develop materials that can be used in defense devices and systems. The Army Research Laboratory funds will support the program's first year of operation.

"Nanoscale" describes objects that measure approximately a millionth of a millimeter, or roughly 1/100,000th the diameter of a human hair.

"The goal of this cutting-edge research is to gain control of structures and devices at atomic and molecular levels and to learn to manufacture and use these devices efficiently," says Jimmy L. Davidson, principal investigator of the new program.

Davidson, professor of electrical engineering and professor of materials science and engineering, will coordinate the research efforts. In addition to Vanderbilt, the University of Kentucky, North Carolina State University, the University of Florida, and the International Technology Center will participate in the program.

Although carbon is the most versatile of elements and is the foundation of most fuels, synthetic materials and biological systems, little is known about its behavior at the nanoscale level. "Using carbon as a building block in this promising new area of science is a potentially boundless resource," Davidson says.

In addition to conducting research, the new program will train graduate students to work in the emerging field and will establish close interactions among U.S. industry and government laboratories.

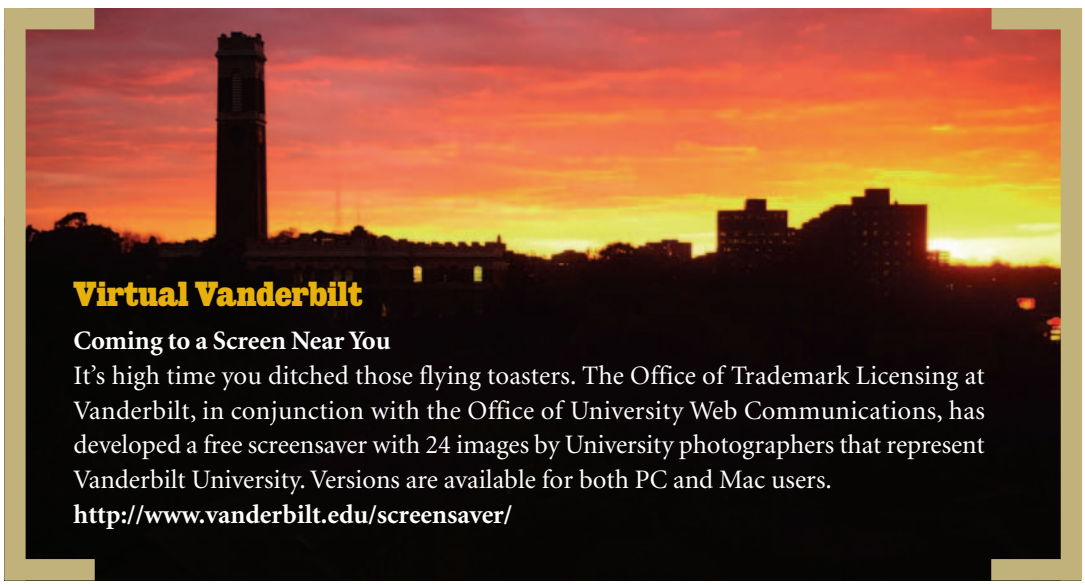
Initial goals include developing diamond/carbon nanostructures for biological and chemical sensors, developing a new energy-conversion device, and developing electron emission devices for advanced electronics.

VUMC Reduces High-Volume Diagnostic Tests

Fear of uncertainty, a litigious society and lack of experience head a long list of causes contributing to over-use of inpatient diagnostic tests. Researchers have even identified a test addiction disorder among some physicians.

But with health-care costs rapidly on the rise, health-care providers, insurance companies and policymakers are all looking for ways to eliminate costs while maintaining or improving quality and safety. Vanderbilt physicians and clinical experts have found a safe, simple and relatively painless method for reducing excessive use of high-volume laboratory, radiology and cardiology tests.

In the mid-1990s, Vanderbilt developed a computer program called WizOrder to support clinical decision-making in the hospital. Clinicians use it to order patient tests and treatments. The program applies clinical logic to issue alerts against orders that appear inappropriate, furnishes tips about best practice, and provides links to in-depth information. Four years »



Virtual Vanderbilt

Coming to a Screen Near You

It's high time you ditched those flying toasters. The Office of Trademark Licensing at Vanderbilt, in conjunction with the Office of University Web Communications, has developed a free screensaver with 24 images by University photographers that represent Vanderbilt University. Versions are available for both PC and Mac users.

http://www.vanderbilt.edu/screensaver/

{Inquiring Minds}

Thoughts Without Words

Babies as young as 5 months old make distinctions about categories of events that their parents do not, revealing new information about how language develops in humans. The research by Sue Hespos, assistant professor of psychology at Vanderbilt, and Elizabeth Spelke, professor of psychology at Harvard University, was published in the July 22 issue of *Nature*.

"It's been shown in previous studies that adults actually categorize things differently based on what language they speak," Hespos says.

"Language capitalizes on a pre-existing system of 'I live in a 3-D world, and I know how objects behave and interact.' This pre-existing ability suggests that children do think before they speak."

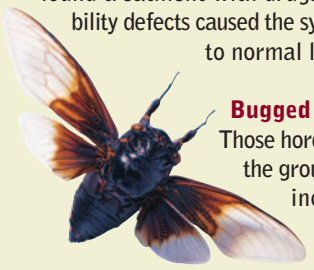
Model for Form of Paraplegia Suggests Treatments

A new genetic model for a motor disorder that confines an estimated 10,000 people in the United States to walkers and wheelchairs indicates that instability in the microscopic scaffolding within a key set of nerve cells is the cause of this devastating disability.

The study, published in the July 13 issue of *Current Biology,* provides insight into the molecular basis of the disease called hereditary spastic paraplegia (HSP). Vanderbilt graduate student Nick Trotta was the first author on the paper.

HSP causes the ends of the nerves that control muscle activity to deteriorate, resulting in weakness, spasms, and loss of function in the muscles in the lower extremities. More than 40 percent of all cases have been traced to a single gene (SPG4) that produces an enzyme called spastin.

Researchers in the laboratories of Kendal Broadie at Vanderbilt and Andrea Daga at the University of Padova, Italy, found treatment with drugs that correct microtubule-stability defects caused the synaptic signal strength to rebound to normal levels.



Bugged by Prime Numbers

Those hordes of cicadas that emerged from the ground this summer may have meant incessant droning and devoured begonias to the rest of us. To Glenn Webb, professor of mathematics, they offer a mathematical mystery: Why do the little buggers emerge only in intervals that are prime numbers?

Webb, who is not the first mathematician to be intrigued by the question, has devised a mathematical model of cicada behavior and published a tentative conclusion: The prime-number life cycle evolved as an effort to avoid predators.

Paleontologist Stephen Jay Gould was among the first to propose that the cicada's life cycle is an evolutionary strategy. Intrigued by Gould's explanation, Glenn Webb created a mathematical model of periodical cicadas and hypothetical predators with two- and three-year life cycles. He found that Gould's argument held up: By emerging only every 13 or 17 years in large numbers, cicadas better ensured their survival.

ago VUMC's Resource Utilization Committee changed the way users order certain high-volume tests. Each morning as they logged into the system, users who had scheduled recurring tests over the next three days got a pop-up message asking if they wanted to continue the testing, cancel the testing or delay a decision. Weeks later, mild constraints were added: Users were prevented from placing automatically recurring orders for certain tests, and common blood chemistry tests that previously could be ordered as a group now had to be ordered separately.

NEIL BRAKE

The results of the initiative, published in the Aug. 2 edition of *Annals of Internal Medicine,* were dramatic and could provide a recipe for a large percentage of inpatient diagnostic testing. The authors say up to 25 percent of high-volume testing could be eliminated nationally.

The pop-up messages were associated with considerable reduction of some tests, but the ordering constraints and graphical displays that came later brought dramatic overnight reductions. There was no negative change in rates of repeated hospital admissions, transfer to intensive care units, mortality, length of stay, or any other quality measures. Study authors say reductions were achieved "without preventing clinicians from ordering the tests they wanted."

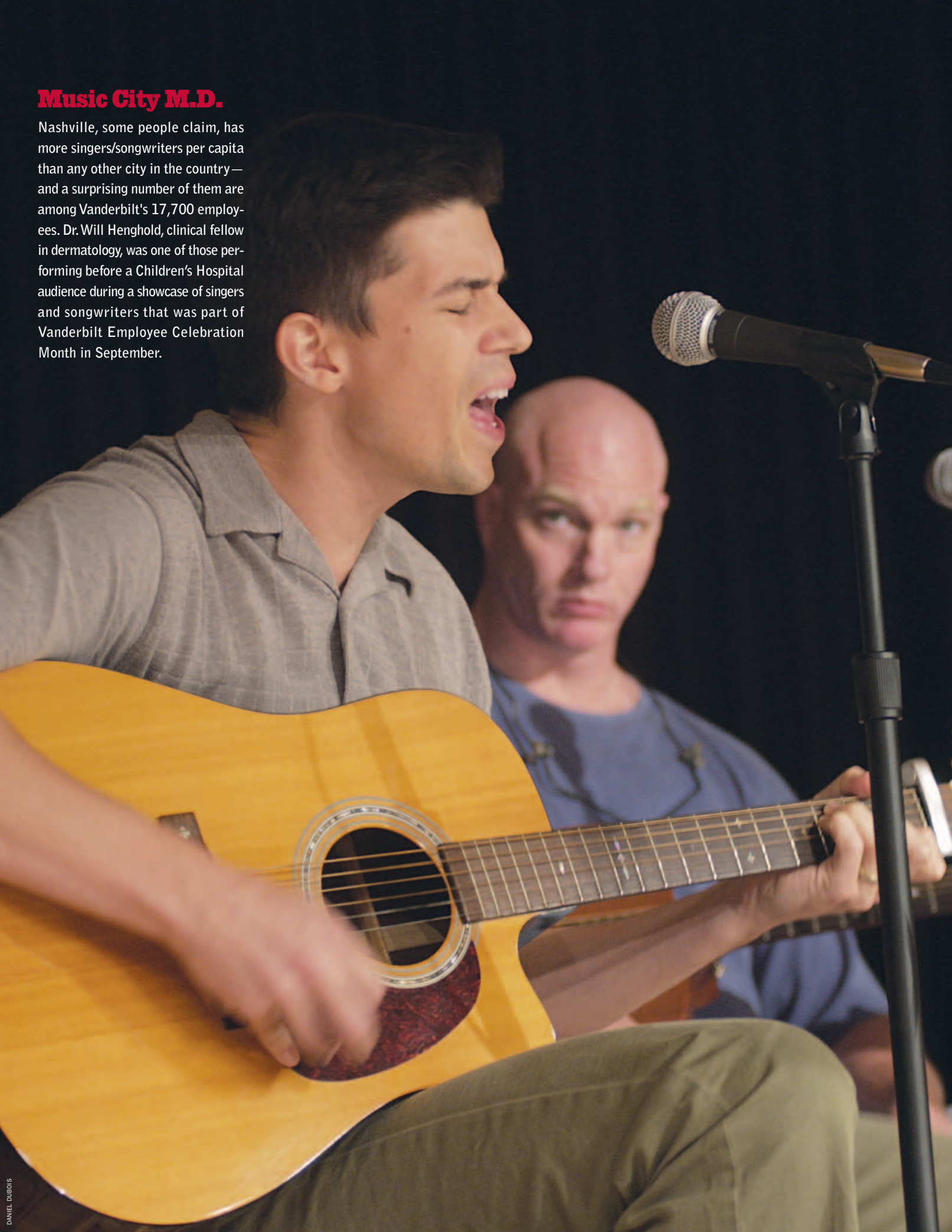
"We're facing an economic crisis in health care, and payers—insurers, employers and government—are getting pretty fed up with levels of spending at the bedside," says Dr. Eric G. Neilson, chair of the Department of Medicine and senior author of the study. "Either we'll do more to manage spending ourselves, or someone will place restrictions on our ability to apply resources to solve patient problems."

Christie Steps Down as Owen School Dean

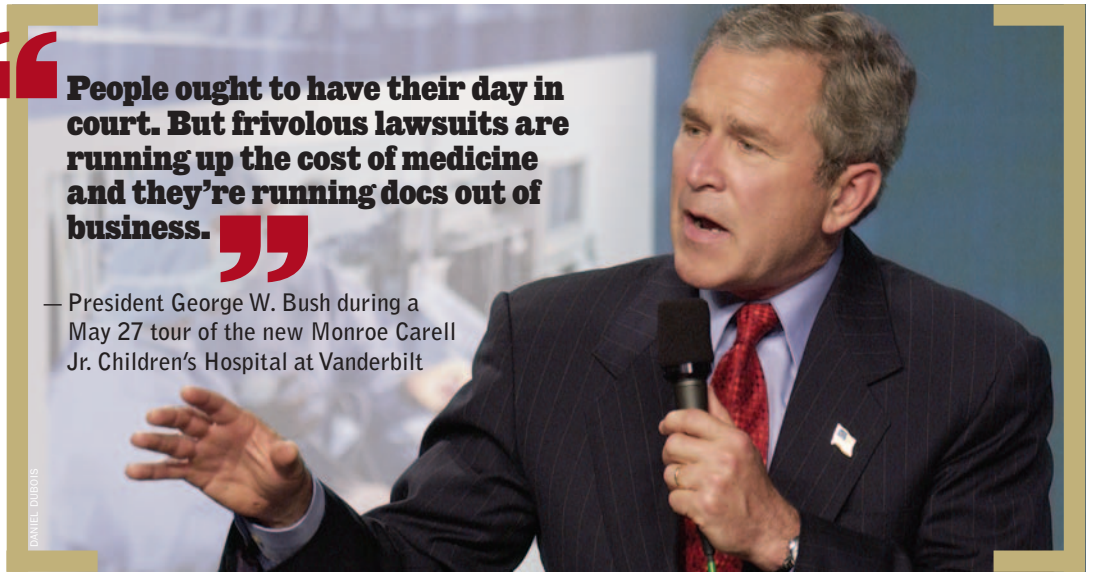
William Christie, who had served as dean of the Owen Graduate School of Management since 2000, stepped down from his position June 1. Following a planned research leave, »

Music City M.D.

Nashville, some people claim, has more singers/songwriters per capita than any other city in the country—and a surprising number of them are among Vanderbilt's 17,700 employees. Dr. Will Henghold, clinical fellow in dermatology, was one of those performing before a Children's Hospital audience during a showcase of singers and songwriters that was part of Vanderbilt Employee Celebration Month in September.



DANIEL DUBOIS



Christie will return to the faculty as the Frances Hampton Currey Chair in Finance.

Jim Bradford, associate dean of corporate relations at Owen, is serving as acting dean following Christie's departure.

"Bill has provided excellent leadership to the Owen School during a turbulent economy that has affected business education across the country," says Provost and Vice Chancellor for Academic Affairs Nicholas Zeppos. "Vanderbilt has been well served by his tenure, and we look forward to his continued teaching and scholarship."

Christie joined the Owen faculty in 1989 and served as associate dean for faculty development before his appointment as dean. In the past decade he has been recognized repeatedly by *Business Week* as one of the top professors in business education. Early in his time at Owen, he co-authored a study that led to fundamental change in the way NASDAQ stocks are traded. During his tenure as dean, the Owen School began several new initiatives, including a revised curriculum, enhanced executive education programs and e-Lab, the country's first research center devoted to Internet marketing.

Bradford, who graduated from Vanderbilt Law School in 1973, previously served as president and CEO of AFG Industries Inc., North America's largest vertically integrated glass manufacturing and fabrication company. He also served as president and CEO of United Glass Corp. and practiced law for 11 years. He returned to Vanderbilt in 2002 as clinical professor of management and was named associate dean later that year.

African-American Studies Program, Black Cultural Center Welcome New Directors

The African-American Studies program at Vanderbilt is poised for fast expansion under new director T. Denean Sharpley-Whiting, one of the brightest young scholars and administrators in the field.

The hiring of Sharpley-Whiting, who previously held a chair of Africana Studies at Hamilton College in Clinton, N.Y., is part of ongoing efforts to stress diversity at Vanderbilt. She earned a bachelor's degree in French literature from the University of Rochester with a minor in African economic history; a master's in French literature from Miami University; and a doctorate in French studies with a minor in African-American literary and cultural criticism from Brown University.

"I absolutely love teaching intro courses because that's where you get people interested," says Sharpley-Whiting, noting that she hopes to launch several new courses in the spring and have two new instructors in place by next fall. "You will see the beginning of a kind of blitz," she predicts. "You'll see African-American Studies programming, speakers and series." She also intends to be involved with a proposed African-American museum in Nashville.

The renovated and expanded Bishop Joseph Johnson Black Cultural Center opens this fall, also with a new director: writer and poet Frank Dobson Jr. Dobson, who left a position as director of the Bolinga Black Cultural Resources Center at Wright State University in Dayton, Ohio, says the key to a successful black cultural center is "creation of community" for all students, not just black students. He envisions a center for student interaction and support and a source of cultural programming and community outreach.

"As a working-class kid from Buffalo who went into academia, I'm sensitive to how foreign a college campus can seem to people of certain backgrounds," he says. "The point is to get it across to them that they can belong here. They can aspire to this."

Dobson graduated from State University of New York at Buffalo and earned a doctorate


T. Denean Sharpley-Whiting


Frank Dobson Jr.

in English from Bowling Green State University, working as a graduate assistant to writer James Baldwin.

He says he will not shrink away from touchy subjects. On his wish list is discussion about genocide in the Sudan and why there is not more outrage in the United States about it. "A black cultural center at a major university in the South has the potential to do things that aren't possible elsewhere because of the history of the South," he says. "A black cultural center at Vanderbilt has the opportunity not only to educate, but, if there are wounds that are still open, to help salve the wounds."

Student Completes Degree 55 Years After Starting It

ENGINEERS ARE KNOWN FOR making sure loose ends are tied up. For William Morrison, the one loose end was an unfinished master's degree at Vanderbilt. In May, at age 80, Morrison received his degree, reaching a goal he had begun working toward when he was just 25.


DONN JONES
Morrison

Morrison received his undergraduate degree in engineering from Vanderbilt in 1949 and immediately began work on his master's degree. He left in 1950 to take a job with Phillips Petroleum without completing the degree requirements.

"After he retired, it occurred to him there was something that he had left unfinished," says Kenneth Galloway, dean of the Vanderbilt School of Engineering. "He was very determined to finish that piece of unfinished work."

Galloway and his colleagues determined Morrison was just three credit hours short of completing his degree. Morrison enrolled in a special topics course and submitted a paper to fulfill requirements for a master's degree in engineering.

"I spent all of 1950 working on my master's degree and got all the curriculum done except for the thesis," says Morrison. "Maybe two or three things caused me not to finish the thesis—the main one being that I was not happy with it. And I was going to school on the G.I. bill and ran out of money."

Morrison went to work for Phillips at the Philtex Experiment Station in Borger, Texas. He obtained three patents for his work there on a liquid extraction process used by the nuclear industry. In 1957 he transferred to Phillips' facility in Idaho Falls, where he worked in the chemical processing plant with nuclear fuel elements until retiring in 1983. He continued to work with the American Nuclear Society on an international committee that studied issues related to nuclear criticality and safety controls for fissionable materials outside of reactors.

Now he's finished what he started 55 years ago. "It was something that was kind of hanging over my head all these years," he says.

{Top Picks}


Fleschner

Traveling Fellowship Will Fund Research in Africa

Kristin Fleschner, BS'03, has been awarded the 2004 traveling fellowship at Vanderbilt. The fellowship will provide $10,000 for a year of travel and study throughout Africa. Fleschner plans to use the fellowship to travel and conduct research in Botswana, Uganda, Zambia and South Africa, studying the issue of sexual violence and the spread of AIDS.

"War has created an environment across Africa in which violence is accepted," says Fleschner, who plans to attend rape-court sessions and observe how the justice system deals with, or fails to deal with, violence against women and children.

Following her year in Africa, Fleschner plans to pursue either a law degree with a focus on women's issues or a doctorate in gender relations.

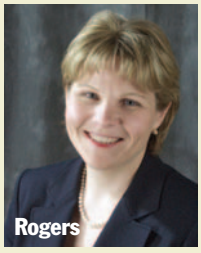
Student Volunteer Wins Top Award

Najla Husseini, BA'04, has been named the Global Health Council's Volunteer of the Year "in recognition of [Husseini's] unwavering commitment to improving the health and lives of citizens around the world and for her determination in establishing a leading university chapter dedicated to promoting awareness of international health issues and policy."

A sociology major, Husseini was a Global Health Action Network coordinator for the Vanderbilt campus, focusing on women and children's health, infectious diseases, HIV/AIDS and emerging threats. Under Husseini's leadership, Vanderbilt's chapter hosted an annual "Global Health Week" and sponsored several health advocacy events during the academic year.

In addition to her work with the Global Health Action Network, Husseini participated in Alternative Spring Break and the Vanderbilt Prison Project.

Engineering Professor's Research Cited


Rogers

Engineering professor Bridget R. Rogers has received the Presidential Early Career Award for Scientists and Engineers.

Rogers' award cites her "contributions to fundamental studies of thin film growth mechanisms, and for being the first to prove experimentally that the composition of multi-component films deposited into microelectronic device features varied with depth into the feature."

The assistant professor of chemical engineering will use the research funding provided with the PECASE award to study thin-film coatings for ceramic materials for use in hypersonic vehicles such as the NASA X-43A space plane that achieved a record-breaking Mach 7—5,000 miles per hour—in March.

"Our ultimate goal is to develop an optimal thin-film coating for hypersonic vehicles that adheres well to the ceramic surface, resists corrosion, and protects the vehicle from high temperatures, low pressure, and high-speed plasma flows during flight," she says.